

The following listing of claims replaces all prior versions and listings of claims in this application.

Listing of Claims

1. (previously amended) An encoder having an input and an output, wherein the input receives a signal, wherein the encoder calculates an entropy value associated with at least a portion of the signal and encodes the signal to include the calculated entropy value, and wherein the output carries the encoded signal, which includes the calculated entropy value.
2. (original) The encoder of claim 1 wherein the signal is an audio signal.
3. (previously amended) The encoder of claim 1 wherein the encoder calculates the entropy value based on a summation of probabilities.
4. (previously amended) The encoder of claim 1 wherein the calculated entropy value is comprised of bits, and wherein each bit is coded by amplitude modulating the signal at a pair of frequencies to preserve an entropy of the encoded portion of the signal.
5. (previously amended) The encoder of claim 1 wherein the signal is encoded to preserve an entropy of the encoded portion of the signal.
6. (previously amended) The encoder of claim 1 wherein the entropy value is comprised of bits, and wherein each bit is coded to preserve an entropy of the encoded portion of the signal.
7. (previously amended) The encoder of claim 1 wherein the calculated entropy value is comprised of bits, and wherein each bit is coded by swapping a spectral amplitude of at least two frequencies in the signal.
8. (previously amended) The encoder of claim 1 wherein the signal is encoded to include the calculated entropy value using frequency hopping.

9. (previously amended) The encoder of claim 1 wherein the signal is encoded to include the calculated entropy value using spectral modulation.

10. (previously amended) The encoder of claim 1 wherein the entropy value is calculated using histograms.

11. (previously amended) A decoder having an input and an output, wherein the input receives a signal, which includes an entropy value, wherein the decoder decodes the signal to read the entropy value from the signal, and wherein the output carries a signal based upon the entropy value.

12. (original) The decoder of claim 11 wherein the signal is an audio signal.

13. (previously amended) The encoder of claim 11 wherein the entropy value represents an entropy having a value determined based on a summation of probabilities.

14. (previously amended) The decoder of claim 11 wherein the entropy value is decoded by amplitude demodulating pairs of frequencies.

15. (previously amended) The decoder of claim 11 wherein the entropy value is decoded by determining swapping events, and wherein the swapping events correspond to swapping of a spectral amplitude of at least two frequencies in the signal.

16. (previously amended) The decoder of claim 11 wherein the entropy value is decoded using frequency hopping.

17. (previously amended) The decoder of claim 11 wherein the entropy value is decoded using spectral demodulation.

18. (previously amended) The decoder of claim 11 wherein the decoder is configured to determine an entropy of the signal and compare the determined entropy to the entropy value.

19. (previously amended) The decoder of claim 18 wherein the decoder is configured to detect at least one of a compression operation or a decompression operation based on the comparison.

20. (previously amended) The decoder of claim 18 wherein the decoder is configured to prevent use of a device based on the comparison.

21. (previously amended) The decoder of claim 18 wherein the decoder is configured to determine the entropy of the signal based on a sum of probabilities.

22. (previously amended) A method of encoding a signal comprising:
calculating an entropy value associated with at least a portion of the signal;
and
encoding the signal to include the calculated entropy value.

23. (original) The method of claim 22 wherein the signal is an audio signal.

24. (previously amended) The method of claim 22 wherein calculating the entropy value includes calculating the entropy value based on a sum of probabilities.

25. (previously amended) The method of claim 22 wherein the entropy value is comprised of bits, and wherein encoding the signal comprises coding each of the bits by amplitude modulating the signal at a pair of frequencies to preserve an entropy of an encoded portion of the signal.

26. (previously amended) The method of claim 22 wherein encoding the signal comprises coding the signal with the calculated entropy value to preserve an entropy of an encoded portion of the signal.

27. (previously amended) The method of claim 22 wherein the calculated entropy value is comprised of bits, and wherein encoding the signal comprises coding each of the bits to preserve an entropy of an encoded portion of the signal.

28. (previously amended) The method of claim 22 wherein the calculated entropy value is comprised of bits, and wherein encoding the signal comprises the coding each of the bits by swapping a spectral amplitude of at least two frequencies in the signal.

29. (previously amended) The method of claim 22 wherein encoding the signal comprises coding the signal with the calculated entropy value using frequency hopping.

30. (previously amended) The method of claim 22 wherein encoding the signal comprises coding the signal with the calculated entropy value using spectral modulation.

31. (previously amended) The method of claim 22 wherein encoding the signal comprises coding the signal with the calculated entropy value using histograms.

32. (previously amended) A method of decoding a signal, which includes an entropy value, the method comprising:

decoding the signal to read the calculated entropy value from the signal; and
providing an output based upon the calculated entropy value.

33. (original) The method of claim 32 wherein the signal is an audio signal.

34. (previously amended) The method of claim 32 wherein the calculated entropy value is based on a sum of probabilities.

35. (previously amended) The method of claim 32 wherein decoding the signal comprises decoding the calculated entropy value by amplitude demodulating pairs of frequencies.

36. (previously amended) The method of claim 32 wherein decoding the signal comprises determining swapping events that correspond to swapping of a spectral amplitude of at least two frequencies in the signal.

37. (previously amended) The method of claim 32 wherein decoding the signal comprises using frequency hopping.

38. (previously amended) The method of claim 32 wherein decoding the signal comprises using spectral demodulation.

39. (previously amended) The method of claim 32 further comprising:
determining an entropy of the signal; and
comparing the entropy of the signal to the calculated entropy value, wherein the output is based on the comparison of the entropy of the signal to the calculated entropy value.

40. (previously amended) The method of claim 39 wherein the output prevents playing of the signal.

41. (previously amended) The method of claim 39 wherein the entropy of the signal is calculated based on a sum of probabilities.

42. (canceled)

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